LETTER

TO

VISCOUNT PALMERSTON, K.G.,

ON THE

POLITICAL IMPORTANCE OF THE EUPHRATES VALLEY RAILWAY, AND THE NECESSITY OF THE FINANCIAL SUPPORT OF HER MAJESTY'S GOVERNMENT.

BY W. P. ANDREW, F.R.G.S., &c.,

CHAIRMAN EUPHRATES VALLEY RAILWAY.

WITH REPORTS BY MAJOR-GENERAL CHESNEY & SIR J. MACNEILL,
AND MEMORANDUM BY SIR JUSTIN SHEIL, K.C.B.

AND MAP.

ALSO MINUTES OF EVIDENCE BEFORE THE HOUSE OF COMMONS ON THE ESTABLISHMENT OF **TELEGRAPHIC COMMUNICATION WITH INDIA THROUGH TURKISH ARABIA,**
BY SIR W. B. O'SHAUGHNESSY; T. K. LYNCH, ESQ.;
AND W. AINSWORTH, ESQ., &c. &c. &c.

LONDON:
WM. H. ALLEN & CO., 7, LEADENHALL STREET.

1857.

LETTER

TO

VISCOUNT PALMERSTON, K.G.,

ON THE

POLITICAL IMPORTANCE OF THE EUPHRATES VALLEY RAILWAY, AND THE NECESSITY OF THE FINANCIAL SUPPORT OF HER MAJESTY'S GOVERNMENT.

BY W. P. ANDREW, F.R.G.S., &c.,

CHAIRMAN EUPHRATES VALLEY RAILWAY.

WITH REPORTS BY MAJOR-GENERAL CHESNEY & SIR J. MACNEILL,
AND MEMORANDUM BY SIR JUSTIN SHEIL, K.C.B.

AND MAP.

ALSO MINUTES OF EVIDENCE BEFORE THE HOUSE OF COMMONS ON THE ESTABLISHMENT OF **TELEGRAPHIC COMMUNICATION WITH INDIA THROUGH TURKISH ARABIA,**
BY SIR W. B. O'SHAUGHNESSY; T. K. LYNCH, ESQ.;
AND W. AINSWORTH, ESQ., &c. &c. &c.

LONDON:
WM. H. ALLEN & CO., 7, LEADENHALL STREET.

1857.

31. MA.05

A DEPUTATION, IN FAVOUR OF THE GOVERNMENT GUARANTEEING A MINIMUM RATE OF INTEREST ON THE EUPHRATES VALLEY RAILWAY, HAD AN INTERVIEW WITH VISCOUNT PALMERSTON, 22ND JUNE.

The deputation consisted of the Earl of Shaftesbury, Mr. Andrew (Chairman of the Euphrates Valley Railway), Mr. P. Anstruther, Mr. W. Ainsworth, Sir F. L. Arthur, Bart., Mr. A. F. Bellasis, Sir W. Colebrooke, C.B., the Earl of Chichester, Major-General Chesney, R.A., Mr. Sotheron Estcourt, M.P., the Hon. J. C. Erskine, Mr. A. S. Finlay, M.P., Lord Goderich, Mr. H. Gledstanes, Mr. W. Hutt, M.P., Mr. Thos. Headlam, M.P., Mr. T. B. Horsfall, M.P., Colonel Harvey, Mr. T. K. Lynch, Mr. John Laird, Mr. Macgregor Laird, Mr. James Merry, M.P., Sir H. Maddock, Major Moore, Sir D. Norreys, M.P., Colonel W. Pinney, M.P., Mr. F. W. Russell, M.P., Sir Justin Sheil, K.C.B., Count Strzelecki, Col. Steinbach, Gen. Sabine, Lord Talbot de

Malahide, the Lord Mayor, Mr. Matthew Uzielli, Mr. W. Vansittart, M.P., Sir W. F. Williams of Kars, Mr. T. A. Yarrow, Mr. Wickham, M.P., Hon. A. Kinnaird, M.P., Mr. Arthur Otway, Mr. Thomas Alcock, M.P., Mr. J. E. Anderdon, Mr. W. Buchanan, M.P., Mr. F. B. Beamish, M.P., Lord Colchester, Lord R. Clinton, Sir Edw. Colebrooke, M.P., Mr. R. W. Crawford, Alderman Copeland, M.P., the Bishop of Durham, the Earl of Donoughmore, Colonel Dunne, M.P., Sir James Duke, M.P., Lord Elcho, Mr. J. C. Ewart, M.P., Mr. W. Fagan, M.P., Sir R. Ferguson, M.P., Lord Robert Grosvenor, M.P., Mr. E. Grogan, M.P., Mr. S. Gregson, M.P., Mr. G. Hamilton, M.P., Mr. J. H. Hamilton, M.P., Colonel Harvey, Mr. H. Ingram, M.P., Mr. W. Kirk, M.P., Mr. T. Longman, Lord Monteagle, the Earl of Mayo, Mr. J. R. Mowbray, M.P., Mr. R. Monckton Milnes, M.P., Sir John Macneill, Mr. H. A. Mackinnon, Mr. G. Macartney, M.P., Mr. P. W. Martin, Mr. C. W. Martin, Mr. G. G. M'Pherson, Mr. F. North, M.P., Colonel North, M.P., the Right Hon. J. Napier, M.P., Mr. C. Newdegate, M.P., Sir George Pollock, G.C.B., Mr. J. Pritchard, M.P., the Earl of Roden, Lord Stanley, Lord Sandon, the Bishop of St. David's, Mr. R. Slaney, Mr. W. Sowerby, Mr. A. Turner, M.P., Colonel Taylor, M.P., Mr. W. Tollemache, M.P., Sir H. Verney, Mr. Whiteside, M.P., Mr. Thos. Williams, Mr. J. A. Warre, M.P.*

Lord Shaftesbury introduced the deputation to Lord Palmerston, and pointed out, in forcible language, the vast importance to this country of securing an alternative route to India, and the great interest generally felt throughout the country in this great undertaking, so calculated to promote

* *Times*, 23rd June, 1857.

commerce, civilization, and Christianity, and stated that Mr. Andrew, the chairman of the company, would submit to His Lordship more detailed information.

Mr. Andrew, after expressing his regret for the unavoidable absence of Lord Stanley, said that for some years it had been considered a great national object to secure an alternative short route to India, but that recently the establishment of the route by the Euphrates had become more and more necessary, and more especially since it had been determined to open up the Valley of the Indus by the application of steam. The great traffic which would pour down this valley from Central Asia and the Punjaub, once flowing towards Kurrachee, would naturally seek an outlet by the sister valley of the Euphrates, at least the lighter and more valuable products as well as the mails and passengers; but the support of the Government was not sought on commercial grounds. That support was sought alone on the ground of the political importance of this ancient line of communication. The grand object was to connect England with the north-west frontier of India, by steam transit through the Euphrates and Indus Valleys. The latter would render movable to either the Kyber or the Bolan, the two gates of India, the flower of the British army cantoned in the Punjaub, and connected by the Euphrates line by means of steamers, the flank and rear would be threatened of any force advancing through Persia towards India. So that the invasion of India by this great scheme would be placed beyond even speculation; and it would be evident, by the great army of India of 300,000 men being united by this means to the army in England, the mutual support they would render each other would quadruple the power and ascendancy of

this country, and promote powerfully the progress, the freedom, and the peace of the world. The countries to be traversed were the richest and most ancient in the world, and might again become the granaries of Europe, and not only supply us with wheat, but with cotton of excellent quality; and his gallant friend, General Chesney, who had recently visited these regions, would tell them that there were hundreds of thousands of camel-loads of this valuable commodity rotting on the ground, from the want of the means of transport. Sir W. F. Williams, of Kars, would tell them there was no difficulty in dealing with the Arabs if they were fairly treated. The Lord Mayor, who had had intimate commercial relations with the East, and Mr. Lynch, of Bagdad, who had for many years traded with the Arabs, would speak to the honesty and trustworthiness of the Arab. As to physical difficulty there was none—the line had been surveyed, and proved to be singularly easy. Her Majesty's Government had given their powerful influence and support in obtaining the firman and concession. They had placed her Majesty's ship *Stromboli* at the disposal of General Chesney and Sir John Macneill, and the engineering staff; and Lord Stratford de Redcliffe had lent his powerful advocacy with the Porte. He (Mr. Andrew) was deeply grateful for the assistance thus far afforded them, but they had now arrived at that point when something more was absolutely necessary—and that was the pecuniary support of Government, to enable the capital to be raised for the prosecution of the work. It was not a matter for private individuals to undertake. If they wanted an investment for their funds, they would certainly not choose Turkish Arabia. The establishment of a steam route by

Government. Many Chambers of Commerce and other influential associations had already memorialized the Government in favour of granting pecuniary aid; and it was believed the country was anxious that this route should be carried out by Englishmen; and it now rested with the Government to say whether they concurred in the importance of the work, and, if so, whether they would be prepared to recommend such an amount of pecuniary assistance, whether by guarantee or otherwise, as would enable this, the most important undertaking ever submitted to their consideration, to be proceeded with.

Sir W. F. Williams, of Kars, stated, that, during his long residence amongst the Arabs, he experienced no difficulty in dealing with them, or in procuring, during his excavations in Susa, any number of workmen he might require; and he also pointed out the great importance of the proposed harbour of Seleucia, as there was not a single good harbour on the Syrian coast.

Count Strzelecki briefly addressed his lordship on the support of successive Turkish Governments to the undertaking, viewing it as of incalculable political importance to England in relation to her Indian possessions.

Mr. Finlay, M.P., speaking from personal acquaintance with the country to be traversed, dwelt on the great capacity for development, if only the means of transport were afforded.

General Chesney gave full explanations regarding the harbour, as to its exact position, capacity, &c.

Sir Justin Sheil, late ambassador in Persia, dwelt on the political importance of the line, and that it would shorten the distance to Kurrachee, the European port of India, by

The Lord Mayor had had (through his agents) extensive commercial transactions with the Arabs, and had found them most reliable and honest; and he considered they were as much alive to their own interests as any other race, and would be in favour of the railway because it would at once give them employment and afford them an outlet for their products.

Mr. Lynch, of Bagdad, from long residence, fully confirmed his lordship's views.

Mr. Horsfall, M.P., assured his lordship that the undertaking was viewed with great interest in the manufacturing districts generally, and placed in his lordship's hands a memorial from the Chamber of Commerce of Liverpool, praying that the Government would extend the necessary pecuniary aid to the Euphrates Valley Railway Company.

Lord Palmerston assured the deputation that the Government were fully alive to the great importance of the Euphrates route; that they had supported and would continue to support it; but he could not give an opinion as to giving the guarantee on the capital without consulting his colleagues, and requested Mr. Andrew to put his proposition in writing, and that it should have a proper amount of consideration, and that Government would be happy to aid it, if in their power.

Mr. Andrew having thanked his lordship for the courteous reception afforded to the deputation, the deputation withdrew, much gratified by the manner in which they had been received.*

* *Morning Herald*, 23rd June, 1857.

EUPHRATES VALLEY RAILWAY COMPANY, LIMITED,
GRESHAM HOUSE, OLD BROAD STREET,
London, 30*th June*, 1857.

MY LORD,

In compliance with the desire expressed by your Lordship, when the deputation waited upon you on the 22nd instant in favour of a guaranteed rate of interest being granted by her Majesty's Government on a portion of the capital of the Euphrates Valley Railway Company, that the proposition should be submitted in writing, I have now the honour to state for your Lordship's consideration that the pecuniary support of Government is sought on the following grounds.

2. The establishment of a railway from the Mediterranean to the Persian Gulf would have the effect of reducing the distance between this country and India by upwards of 1,000 miles, and the time to about fourteen days, or about half the period now occupied.

3. It would be the means of consolidating the power of the Sultan in his Asiatic dominions.

4. By means of this railway, taken in conjunction with the system of steam transit now being established along the Valley of the Indus, from

Lahore to the Sea at Kurrachee,* the large force stationed in the Punjaub would be rendered of incalculable importance by steamers uniting the line of the Indus with that of the Euphrates; for in that case any hostile force advancing towards the Indus, would not only be met on the line of that river, but would be threatened along the seaboard of the Persian Gulf, and the line of the Euphrates in flank and rear.

5. The Indus and Euphrates thus united, the dangerous isolation of Persia would be at an end, and a Russian invasion of India would cease even to be speculated upon.

6. The first section of the line from Seleucia to the Euphrates has been surveyed by Major-General Chesney and Sir John Macneill, with an engineering staff, and has been reported as of easy construction. Copies of the Reports of these able and scientific gentlemen are annexed for your Lordship's information.

7. The Turkish Government undertake to commence, simultaneously with the railway, the con-

* Kurrachee is not only the port of the Indus and Central Asia, but, from its geographical position and other advantages, appears destined to become, if not the future metropolis of India, most certainly the second city and the European port of that empire.

struction of a harbour at the mouth of the Orontes at the proposed terminus of the railway..

8. The harbour has been surveyed by Sir John Macneill, with the assistance of the officers of her Majesty's ship *Stromboli;* plans of the proposed works have been already submitted to the First Lord of the Admiralty, and they are now forwarded for your Lordship's inspection.

9. There being no harbour on the coast of Syria better than the open roadsteads of Beyrout, Jaffa, Tripoli, and Acre, or the pestilential harbour of Alexandretta, the importance of having a safe and commodious harbour will be apparent, for political as well as commercial purposes.

10. This harbour, connected by means of the railway with Bussorah, at the head of the Persian Gulf, would give to England the first strategical position in the world.

11. The resources of England being made promptly available on any emergency in the East, Chatham and Southampton would become the basis of operations instead of Kurrachee, or Bombay, and would enable this country to anticipate or repel, whether in Europe or Asia, any attack, with the rapidity and advantages of an irresistible force.

12. On an emergency in India, troops from

England could be landed at Kurrachee in three weeks, and in another week at Lahore, by steam transit.

13. The Euphrates Valley Railway, in addition to its political advantages, would powerfully promote the commerce and civilization of the world at large; and that the commercial and manufacturing communities concur in these sentiments, has been shown by the addresses lately submitted to your Lordship. They are quite alive to the importance of obtaining cotton, wool, sugar, indigo, and other products from India and Mesopotamia, and the production being effected by free labour, would of necessity tend to the extinction of slavery.

14. Through the zealous exertions of Major-General Chesney, aided by the advice and powerful support of Viscount Stratford de Redcliffe, a concession was granted by the Turkish Government, in the early part of this year, guaranteeing a minimum rate of interest of six per cent. on the capital required for the first section, from the Mediterranean to the Euphrates, besides affording other privileges.

15. But as these terms, from the state of the money market and other causes, have neither been, nor are likely to be, sufficiently attractive

to induce the British capitalist to embark his money in a distant enterprise, the deputation, of which I had the honour of being a member, waited upon your Lordship, with the view of impressing upon your attention the absolute necessity of the pecuniary support of her Majesty's Government being extended to the undertaking, in the event of the Government concurring in the opinion expressed by the deputation, that the Euphrates Valley Railway was a work of great national importance.

16. It was most satisfactory to the deputation to have from your Lordship the assurance that her Majesty's Government entirely concurred with the deputation as to the great importance to this country of connecting England and India by the Euphrates Valley route, and that it would continue to receive the countenance and furtherance of Government.

17. The financial support required from her Majesty's Government is a counter-guarantee of 5 per cent. for 25 years, or 4½ per cent. for 50 years, on the capital of £1,400,000 for the first section. The responsibility incurred by the Government in granting this assistance would, it is believed, be merely nominal, and could only accrue in the event of two contingencies: the

Railway not paying a moderate dividend, and the Turkish Government failing to fulfil its part of the contract.

18. Only under the above circumstances could her Majesty's Government be called upon to make any contribution; and it will be seen, by reference to Sir John Macneill's Report, that the existing traffic upon that portion of the route of the proposed railway is sufficient, in his judgment, to yield a dividend of 8 per cent. on the capital required.

19. The East-India Company might fairly be expected to share the responsibility of the counter guarantee, in the same way as they have already contributed to the subsidy to the European and Indian Junction Telegraph Company, as the establishment of the proposed route appears to be of vital importance for securing the good government and peaceable possession of India.

20. The experienced and distinguished gentlemen with whom I had the honour of being associated in waiting upon your Lordship on the 22nd instant, are well aware that the question of the Government guaranteeing interest on an industrial undertaking is not free from difficulty, and this difficulty would be increased if, on the present occasion, the granting of the guarantee

might hereafter be quoted as a precedent for similar demands.

21. The pecuniary support of Government is, on the present occasion, sought not on industrial or commercial considerations, but on account of the political importance of the railway to the empire at large; and it is to be remembered that whatever assistance the Government may render to the Euphrates Valley Railway can never be quoted as a precedent for the furtherance of any similar undertaking, for no similar undertaking can possibly be brought forward, as the route proposed is at once the shortest and the easiest between England and India; the whole length of the Valley of the Euphrates is so free from impediment, that it would seem as if Providence had especially ordained it to be the great highway of nations between the East and the West.

22. I beg to call your Lordship's attention to the accompanying Memorandum by Sir Justin Sheil on the political advantages that might fairly be expected to accrue to England by the proposed Euphrates Valley Railway being in the hands of Englishmen, and to the annexed Report of the Evidence in the Committee of the House of Commons on the European and Indian Junction Telegraph Company, to the effect that no

danger is to be apprehended to the construction of either a telegraph or a railway from the Arabs on the banks of the Euphrates and Tigris.

23. In confiding to the consideration of Her Majesty's Government what is believed to be the most important work, viewed in all its bearings, that was ever submitted to any Government, I must state the general conviction that the Euphrates route will most assuredly pass into other hands, if England declines the task.

24. I beg again to express, on behalf of the deputation, their grateful sense of your Lordship's consideration and courtesy.

I have the honour to be, my Lord, your Lordship's most obedient humble servant,

(Signed) W. P. ANDREW,
Chairman.

The Right Honourable
VISCOUNT PALMERSTON, K.G.

REPORT ON THE EUPHRATES VALLEY RAILWAY, BY MAJOR-GENERAL CHESNEY, R.A. F.R.S. &c. &c. &c.

TO THE CHAIRMAN AND DIRECTORS OF THE EUPHRATES VALLEY RAILWAY COMPANY.

LONDON, 13*th February*, 1857.

GENTLEMEN,

We have, as you are all aware, obtained from the Porte such a general concession as will enable us to lay down a Railway between the Mediterranean and the Persian Gulf, in three consecutive sections; the first of which, from the mouth of the Orontes to Jaber Castle on the Euphrates, has been definitively settled by the concessions and firman of the Sultan; so that nothing is wanting to ensure complete success excepting the same support and co-operation from the Government at home which it has already so warmly bestowed on the undertaking in Turkey.

Referring you to the interesting letter of Captain Burgess, R.N., and to the report of Sir John Macneill respecting the Port to be constructed near the Orontes and the nature of the country to be traversed, as well as to the minutes sent home by myself, I shall on the present occasion confine my observation to four material points.

1st. The advantages that would accrue to England.
2nd. The existing commerce, and its extension.
3rd. The difficulties expected from the Arabs.
4th. The means of laying down the proposed Railway.

1st. By means of the proposed Railway, troops and warlike stores, mails, &c., could be conveyed from England to

India (Kurrachee) in the space of 15 or 16 days,* and to Southern Persia in a much shorter time.

The opening of this route would, as already stated, enable large tracts of country admirably adapted for the growth of cotton, sugar, coffee, and indigo, to be cultivated, which now lie comparatively useless, and would lead to a large increase in the consumption of British Manufactures in Turkey, Central Asia, India, and Persia, it being the most direct, and consequently the cheapest means of transport to those countries. These remarks apply especially to Persia, to which the proposed line gives a much shorter, cheaper, and readier access for our extensive commerce with that country, than the miserable mountain mule-road from Trebizonde now in use, and which has the additional evil of being partly under Russian control.

2nd. Profane as well as sacred history show us that extensive commerce has in all ages been carried on through Arabia. And so it continues to this very day. For although under the name of Gumrook, or custom duties, trade is subject to some exactions from the Arabs, it is at this moment very extensive; much more so indeed than I had ventured to expect. I was aware from the Custom House returns, as given in the Appendix to my work on the Expedition to the Euphrates and Tigris, that the Indian trade to Mesopotamia alone approached two millions; but I found the trade through Aleppo and Northern Syria much more important. Sir John Macneill met in one day 1,453 laden animals between Suedia and Antioch; and it appeared from the registers, that, on an average, 1,200 camels and horses pass the Jisr Hadid every day with goods from Aleppo or Killis, and various other places.

The papers sent home by Mr. Kennedy, which have been printed in connection with the Euphrates Valley Railway,†

* *Vide* "Memoir on the Euphrates Valley Route to India, by Mr. Andrew," p. 70.

† *Vide* "Memoir on the Euphrates Valley Route to India, by Mr. Andrew."

show that 181,100 tons of goods are annually imported through Aleppo, and 179,800 tons pass from that city for export. These figures, I must observe, are the results given by Mr. Kennedy, *exclusive* of Mossul and Killis, which have been overlooked by him. Their trade is very considerable. The value of the above-mentioned imports is about £1,250,000, of which £444,689 are from Great Britain; while that of the exports amounts to about £1,050,000. Of the exports, it appears that 107,800 tons are brought from towns in or near Mesopotamia, such as Baghdad, Hillah, Anah, Bussorah, &c. &c., and that 118,100 tons are imported into those places.

Subsequently to this account from Mr. Kennedy, I obtained a copy of a report to the Foreign Office on the trade of Aleppo from 1851 to 1855.* By the details contained in that paper, it appears that the imports to and through Aleppo in 1855 amounted to about £1,214,059, and that the exports were £1,254,130, irrespective of an internal trade with Turkey, which in 1856 amounted to £1,079,556.

In bringing these facts before the Tanzimat, and in pointing out the present expense of carriage (which is from £4 to £6 per ton from Aleppo to Alexandretta), in order to prove that the Railway would give ample returns, I had also an opportunity of showing, by the report of Suleiman the late Governor of Aleppo, that he actually paid into the Treasury in 1853, 17,000 purses, which, being taken at 3 per cent., gives upwards of two millions sterling.

With reference to the extension of commerce in these countries, I may cite that of Mossul—which is not included in the preceding returns. In 1844, £32,000 duty were paid by the pasha of Mossul, on goods valued at more than one million sterling. Our consul at that place, Mr. Rassam (who cultivates cotton rather extensively, and is now introducing the Sea Island plant), assures me that if the means of transport

could be procured, there would be at least 300,000 camel-loads annually of cotton, wool, wheat, barley, madder-roots, tobacco, &c., sent from Mossul for exportation. But this is only the increase that may be expected in one instance. A proportionately great one is likely to be the consequence of facility of transport elsewhere. Cotton, silk and grain will, without any doubt, be more largely cultivated on the plains between Suedia and the river Euphrates.—In fact, nothing is wanting but an outlet and moderate protection, to develop the resources of this large tract of country,—superior in fertility to Egypt,—and to produce an enormous commerce in Mesopotamia and Babylonia, in cotton, wool, wheat, indigo, sugar, copper, tobacco, valonia, red and yellow berries, &c.

3rd. The next point for consideration — the Arabs — is usually considered a serious one, indeed, more so than it deserves. For I am firmly persuaded that with judicious management everything can be satisfactorily arranged with this people. I found this opinion on the fact, that trade has *always* existed in these countries, and on my own experience of the Arabs. It is obvious that if they were to endeavour to stop trade altogether, instead of levying a toll or duty, as is their practice, they would do themselves an irreparable injury; and they are perfectly alive to their own interests in this matter. With reference to a more enlarged trade, and to the means of insuring its security, I think it would be desirable to carry out the proposal made by Sir John Malcolm more than 25 years ago, to place a judicious and influential commissioner in Arabia to make arrangements with the tribes from time to time. It is not very long since the Arabs themselves had agents in Damascus and Aleppo, who received the stipulated duties for the goods passing through Arabia under their guarantee. From my experience of these people, I think such arrangements may be considered safe and binding. In the papers placed by Government before Parliament, I have already shown that the Arabs carried money for me in various small groupes, to the amount of several thousand pounds. They also carried

gunpowder and firearms, and various kinds of stores, without any loss whatever to their employers. They also placed depôts of fuel along the river, and most faithfully fulfilled their contracts at distant places, where we had no kind of control over them. These may be called the brighter portions of my experience of several years among this people; for it is quite true that I have also experienced different treatment from them. As a simple traveller, I have been robbed more than once; but I may add, as a curious fact, that even under these circumstances, I was able, on the faith of the English name, to borrow money from the very individuals who had already taken mine. I think, if judiciously managed by those who know something of their peculiarities, *we have nothing to fear from the Arabs.*

The singular character of this people enters largely into the 4th and operative part of the question.

The Sultan's authority is at present somewhat restricted in the country, but it will, ere long, be strengthened and consolidated in that part of the world. *As Khaliph* he is the acknowledged head of their religion; but *as Sultan* his power is questioned, and sometimes even resisted by the wandering tribes, though not so by the sedentary inhabitants, who are more or less obedient to the laws of the empire.

For the first part of the proposed undertaking, that of the connection of the Mediterranean with the Euphrates, there is no danger whatever; and it is needless to remark that the completion of this proposed portion of the route alone, will of itself very materially shorten the distance and time between England and India. Beyond Jaber it may be otherwise, although I hope not to any serious extent. Indeed, I think, that the protection as arranged in detail on the part of the Sultan, will give us the necessary security.

Bearing in mind that the Sultan's power is *unquestioned* at Mossul, at Baghdad, at Bussorah, and at other places, we have only to fear the predatory movements of the nomad tribes who intervene; and with such *points d'appui*, as large

garrisons in Baghdad and some other places, I do not apprehend any serious difficulty from this quarter; especially as we may expect the assistance of the sedentary Sheikhs of the towns along the Euphrates and Tigris, who, in some measure, depend indirectly upon the Sultan through the chief Pashas. In short, having the immediate support and protection of the Sultan, with ample means as to troops, and our own increasing influence among the Arabs in consequence of the employment of their camels and themselves to a large extent, I do not see that we have anything to fear, nor do I anticipate any difficulty beyond that of organization, in laying down the rails. The construction of a Railway being a gradual operation, its progress, like my intercourse with the tribes in 1835, 1836, and 1837, will be gradual also; during which time they will be taught to second, rather than oppose, the Railway, and by the time it has reached Aleppo, we may count on the cordial support of this singular people. Three different messages of congratulation were sent to me whilst recently at Aleppo—one of these was accompanied by an offer to bring 4,000 or 5,000 workmen from the neighbourhood of [redacted] some of whom had been employed as the excavators of the Assyrian ruins.

In conclusion, I may mention that in all my negotiations with the Porte, I set aside entirely all increase of commerce from India, Central Asia, and Persia, and founded my calculations solely on the commerce now actually existing, which give the following results:—

The imports to Alexandretta alone amount to 50,000 tons, and the exports to about the same, the total value being about $2\frac{1}{2}$ millions sterling* in 1855, the whole of which would pass over the Railway between the Mediterranean and Aleppo, and the Euphrates. The probable receipts of the first section of the Railway would be as follows:—

Imports and exports, 100,000 tons, at £2 per ton	£200,000
Deduct 50 per cent. for working expenses ...	100,000
Leaves	£100,000

* *Vide* Mr. Acting Consul Barker's Report annexed, pp. 23—34.

IMPERIAL

or equal to 7 per cent. on the capital. This is exclusive of passenger traffic. The rate of carriage for goods between Aleppo and the sea varies from £3. 6s. 8d. to £6. 13s. 4d. per ton ; in the above estimate of the receipts of the proposed Railway, only £2 per ton is charged for the carriage between the Euphrates and the Mediterranean.

Should you require any further information regarding the concessions which have been obtained from the Porte, and which you have received in detail, I shall be most happy to afford it.

I have the honour to be, Gentlemen,

Your obedient Servant,

F. R. CHESNEY,

Major-General.

APPENDIX.

Mr. Acting Consul Barker's *Report on the Trade of Aleppo with Europe and Turkey in* 1855.

The gross returns show that the trade in imports and exports has nearly doubled every year since 1851, and that all the elements for a further increase exist, and only require favourable circumstances and increased facility in the means of transport to the coast for their development, particularly the exports in grain, which have been considerable during the last two years, whereas in the preceding years not a single quarter was exported.

Facilities of Transport required.

Grain now Exported.

In a country where accuracy is unknown, and where the Government itself depends on Custom-house Officers for information, who are generally unwilling to give any, as the Customs are farmed annually to the highest bidder, our means of obtaining correct data are very limited. I have been guided by the general knowledge common to all the mercantile community, which I have confronted with what I have been able to learn from the Custom-house, and have arrived at the following results :—

Difficulty in obtaining correct Data.

The imports from Great Britain in manufactured goods, and in two or three other articles, form, in quantity, about 2-3rds of the whole trade. The French, Italian, German, and Swiss, make up the remaining 1-3rd. But some of the French and Italian goods are of greater value; as for instance—cloth, silk, stuffs, &c., each bale of which is worth about £150, so that

Two-thirds British Goods.

One-third French, Italian, and German.

British and Continental Goods nearly equal in value.

the British trade, in value, would be reduced to one-half. In Colonials, the French and Italians import in quantity and in value about as much as Great Britain. Again, the whole line of coast from Constantinople to Alexandria amounts to as much as the French, Italian, and Swiss trade; which would give us a fair proportion, 1-3rd in value, as the amount of the imports from Great Britain.

The following approximate statement will show the increase since 1851 :—

Total Amount of Value of Goods Imported from Great Britain in 34 *Vessels in* 1851.

6,752	Bales manufactures	@ £20	0s. ..	£135,040	
56	Barrels tin ..	@ 15	0 ..	840	
300	Boxes tin plates ..	@ 1	15 ..	525	
	Pepper, pimento, logwood, iron, lead, &c.			10,000	
				£146,405	
	French, Italian, German, Swiss, &c., less in quantity but greater in value, about as much..			£146,405	
					£292,810
515	Barrels sugar ..	@ £5	.. ..	2,575	
325	Bags coffee ..	@ 4	.. ..	1,300	
118	Boxes cochineal ..	@ 50	.. ..	5,900	
73	,, indigo ..	@ 80	.. ..	5,840	
				£15,615	
	French, Italian, German, and Swiss, quite as much			15,615	
					31,230
					£324,040
	Coasting trade from Constantinople, Greece, Smyrna, and Egypt, as much				162,020
					£486,060

Coasting Trade about the same value.

Total Amount of Value of Goods Imported from Great Britain in 60 *Vessels in* 1855.

21,368	Bales manufactures ..	@	£20	..	..	£427,360*	In 1855, 60 Vessels from Great Britain with £471,353.
467	Bags pepper and pimento	@	3¼	..	..	1,634	
943	Barrels sugar	@	5	..	..	4,715	
534	Bags coffee	@	4	..	..	2,136	
123	Cases cochineal	@	50	..	..	6,150	
51	Cases indigo	@	80	..	..	4,080	
1,435	Packages drysalteries ..	@	3	..	..	4,305	
6,991	,, not declared..	@	·3	..	..	20,973	
						471,353	
	French, Italian, German, Swiss, less in quantity but greater in value, about as much ..					471,353	French, German, &c. in 1855, £471,353.
	Coasting trade from Constantinople, Greece, Smyrna, &c., about as much					471,353	Coasting Trade, in 1855, £471,353.
	Total value					£1,414,059	

The prices are the average at Aleppo.

The following Statement will show the Increase in Exports in 1854.

90,000	Quarters wheat.. ..	@	£1	15s.	..	£157,500	Exports from Aleppo in 1854.
30,000	,, barley ..	@	1	0	..	30,000	
15,000	,, millet ..	@	1	0	..	15,000	
4,000	Tons sesame seed ..	@	12	0	..	48,000	
500	,, galls	@	75	0	..	37,500	
1,000	,, cotton	@	30	0	..	30,000	
1,000	,, wool	@	40	0	..	40,000	
	Allow for madder roots, yellow berries, scammony, gums, boxwood, cocoons, olive oil, reeled silk, &c.					150,000	
	Internal trade from Aleppo to Constantinople, Smyrna, Greece, &c., in manufactures, silk, pearls, &c. &c. &c., say					485,630	
						£993,630	

Exports in 1855.

Exports from Aleppo in 1855.

120,000	Quarters	wheat	.. @ £2 ..	..	£240,000
50,000	,,	barley	.. @ 1¼ ..	..	62,500
25,000	,,	millet	.. @ 1¼ ..	..	31,250
2,500	Tons	flour ..	.. @ 12 ..	..	30,000
5,000	,,	sesame seed	.. @ 18 ..	..	90,000
750	,,	galls ..	.. @ 65 ..	..	48,750
1,000	,,	cotton ..	.. @ 36 ..	..	36,000
2,000	,,	wool ..	.. @ 40 ..	..	80,000
	Allow for sundry articles as above ..			..	150,000
	Internal trade to Constantinople, Smyrna, &c., as above ..			..	485,630
					£1,254,130

Specie and Bills of Exchange not included.

In the foregoing tables no allowance is made for specie in large amounts, which passes outwards and inwards, according to the rates of exchange, which has been on an average in 1855, at £120 on London, and £119 on Constantinople, and bills of exchange from the interior of Mesopotamia on Aleppo 5½ per cent. in favour of those countries; as the currency in coin is at a lower rate than in Aleppo.

The Export of Grain has been increased by the demand in Europe and for the Armies in the field.

The export trade in grain has been increasing rapidly with the high prices in Europe, since 1851, but the great impulse has been given to it by the demand at Constantinople to supply the allied armies, and the increased consumption in the capital; and were the means of transport to the coast available, the whole of Mesopotamia would pour in incalculable supplies, at prices far below those for the same articles in the Black Sea. Upwards of 50,000 quarters of grain, belonging to different purchasers, still remain in store to the east of the Euphrates, and double that amount remain in store, unsold, for want of the means of transport to Alexandretta. Were roads made from Mesopotamia to the coast, the influx of trade would well repay the expense, for, at present, camel and mule carriage are scanty, and the charges very heavy.

Roads would increase the Trade.

Piastres 100 to 200, paid

During the year 1855 the rate of carriage-hire from Aleppo to Alexandretta has varied from piastres 100 to piastres 200

per five cwt., which is equal to 18*s.* 5*d.* to 26*s.* 5*d.* on the quarter of wheat, and from £3. 6*s.* 8*d.* to £6. 13*s.* 4*d.* on the ton of goods. Whereas the price of grain in Aleppo has ranged from 25*s.* to 30*s.* per quarter of wheat, and 11*s.* to 14*s.* per quarter for barley. At Orfa wheat has been selling from 10*s.* to 18*s.* a quarter, and barley at half these prices, although they are the best grown in the country.

for 5 cwt. or 18/5 to 26/5 per quarter, and from £3. 6*s.* 8*d.* to £6. 13*s.* 4*d.* per ton.

As soon as the high prices of grain in Europe admitted of exports being made, the restrictions which previously existed were removed by the Porte, and an increased amount of cultivation was immediately the result. Before a year had elapsed, hundreds of animals,—camels, horses, and asses, were seen day and night conveying grain to the coast, pursuant to contracts, and the succeeding year a still greater number were engaged in this business; and there is no doubt, were roads made, that the agriculture of the whole of the interior would increase so rapidly, that the produce would be sold at very remunerating prices.

Increase of cultivation follows the demand, &c.

Animals in great demand.

Roads would produce an immediate increase of cultivation.

No articles are prohibited to be imported or exported, except such as can be used for military purposes, which cannot be landed at Alexandretta or Latakia without permission; but such permits are always given by the local governors under certain guarantees. Nor are any prohibited to be imported from any other place than the one of their growth or production.

There are no privileges of importation or exportation in favour of any shipping, or of any articles except salt and soda, which are government monopolies. Nor is there any difference in the duty on goods imported in foreign ships, the same rates of duty being paid by all according to the tariff agreed upon by the representatives of European Powers at Constantinople, 3 per cent. on imports, and 2 per cent. internal duty, and 9 per cent. on exports. But the merchants generally come to some compromise with the custom-house officers, and pay a fixed pro-rata on the tariff—of course always in their favour.

3 per cent. on Imports, 2 per cent. internal duty, 9 per cent. on Exports.

No port or tonnage dues at Alexandretta, coming or going.

All goods landed pay duty.

Toll is paid at Baylan.

There are no tonnage dues or port dues at Alexandretta for entering or clearing from that port; nor can goods be warehoused on importation. All that are landed are compelled to pay duty, but no farther duty is required on exporting the same goods, if not taken into the interior or consumed at the port. Toll is paid at Baylan, nine miles from Alexandretta, on the Aleppo road, on all goods to be exported to the capital or other parts of the Sultan's dominions; exports to Europe do not pay any toll.

Aleppo the Emporium of Arabia, Mesopotamia, &c.

The absence of restrictions, and the progressive increase in the trade of Aleppo, which is the emporium of the whole of Mesopotamia, Bagdad, Persia, and the south of Arabia, and the link of communication between those countries and the Mediterranean, in proportion as the demand in Europe for articles which admit of mutual exchange has been felt, indicate healthy commercial relations; and a wide field for future enterprise when the affairs of Turkey will admit of a large amount of capital being transmitted, and the necessary means adopted to have carriage-roads, or railways, or tram-rails, to convey the unlimited production of these extensive countries to the coast. At present one-third of the trade is British capital, and one quarter British merchandize, but these pass principally through native merchants' hands, and about half of the trade is conveyed in foreign tonnage.

Roads would give a wide field for Capital.

One-third of the present Trade is carried on by British Capital and one-quarter British Merchandise.

One-half in Foreign Vessels.

The French, Italian, Swedish, and Greeks are the principal nations whose ships are employed.

Manufactories of Aleppo celebrated.

Aleppo has ever been celebrated for its manufactures, which are sent to all parts of the East, on account of their strength and durability, and which formed a very considerable branch of trade until the Egyptian occupation of Syria; but, during the whole of that domination to 1840, this trade was much depressed. A re-action took place on the restoration of Syria to the Porte; but the revolution in 1850 put a stop to all enterprise, and Aleppo has, since 1850, been gradually recovering from that unfortunate event.

Suffered from the Egyptians in 1840.

Since 1850 trade of Aleppo improving.

The following table will show the number of looms at present at work, and the quantity of goods manufactured annually :—

Articles.	Style and Texture.	No. of Looms.	Number of Pieces.	Value in Pias per piece.	Total Value in Piastres.	Nature of the Manufactures.
"Chitara" ..	Cotton and silk stuffs ..	2,500	1,200,000	25	30,000,000	
"Gazlieh" ..	Cotton stuffs throughout	1,000	600,000	11	6,600,000	
"Cottonee"	Cotton and silk satined	500	120,000	75	9,000,000	
"Alagia" ..	Silk and little cotton ..	400	134,000	60	8,640,000	
"Agabanee"	Cotton embrd. with silk	50	12,000	50	600,000	
"Sawaree"	Silk and gold thread ..	100	9,600	200	1,920,000	
"Checkmah"	Ditto, with cotton	50	7,200	100	720,000	
"Atlass" ..	Silk satins	15	3,600	70	252,000	
"Fontah" ..	Cotton and silk aprons..	50	48,000	10	480,000	
"Boohieh"..	Silk handkerchiefs	25	24,000	20	480,000	
"Girdles" ..	Cotton and silk coloured	20	4,800	20	96,000	
"Ditto"....	Cotton coloured	50	24,000	8	192,000	
"Kham" ..	Cotton cloth, not dyed..	200	134,400	20	2,688,000	
"Abee"....	Woven wool and cotton	100	28,800	25	520,000	
"Mandeel"	Black cotton handkchfs.	300	192,000	30	5,760,000	
"Ditto"....	Coloured cotton handkfs.	300	96,000	20	1,920,000	
		5,560	2,638,800	Pias.	69,292,000	

The internal trade of Aleppo is considerable, and I think it has been underrated; for, of late years, the trade of Damascus and that of the south of Syria and Palestine, has not progressed in the same proportion as Aleppo. Perhaps the depression mentioned above may have contributed to stimulate enterprise on the reaction taking place; or perhaps other causes attendant on the fluctuation of trade, such as the establishment of steam communication, may have been gradually bringing the wants of the inhabitants of Mesopotamia to this city. Certainly, population has not been increasing at all, nor has kept pace with the increased demand. I have endeavoured, in the following table, to show the movement of the internal trade of Aleppo with Turkey and with Europe at the close of the year 1855, obtained from the most authentic sources to be found in this country.

Trade attracted from Mesopotamia.

INTERNAL TRADE OF ALEPPO WITH TURKEY.

ARTICLES.	From whence Imported.	In what Place Consumed.	Pieces.	English Hundred-weight.	Value in Piastres Prices Current.	Per Cwt. or Per Piece.	Value in Piastres.	Value in £ Sterling.	Remarks.
Aleppo Manufactures.									
"Chitara" cotton and silk stuffs ..	Aleppo.	Turkey and Mesopotamia	1,200,000		25	per piece.	30,000,000	240,000	About 10 per cent. of these manufactures are consumed in Aleppo, and the rest sent to Turkey and Mesopotamia.
"Ghazlieh" cotton stuffs	,,	,,	600,000		11	,,	6,600,000	52,000	
"Cottonee" cotton and silk satined	,,	,,	120,000		75	,,	9,000,000	72,000	
"Alagia" cotton and silk	,,	,,	134,000		60	,,	8,064,000	64,000	
"Agabanie" cotton, embroidered with silk	,,	,,	12,000		50	,,	600,000	4,800	
"Sawarce" silk and gold thread ..	,,	,,	9,000		200	,,	1,920,000	15,360	
"Chekmah" cotton, silk, and do..	,,	,,	7,200		100	,,	720,000	5,760	
"Atlass" silk satins	,,	,,	3,600		70	,,	252,000	2,160	
"Foutah" cotton and silk aprons..	,,	,,	48,000		10	,,	480,000	3,840	
"Boolrich" silk handkerchiefs	,,	,,	24,000		20	,,	480,000	3,840	
"Mandeel" black cotton do.....	,,	,,	192,000		30	,,	5,760,000	46,080	
Do. coloured cotton do.....	,,	,,	96,000		20	,,	1,928,000	15,360	
Girdles, cotton and silk coloured ..	,,	,,	4,800		20	,,	96,000	760	
Do. cotton coloured	,,	,,	24,000		8	,,	192,000	1,536	
"Kham" cotton cloth, not dyed ..	,,	,,	134,400		20		2,688,000	21,504	
Do. do. from Idlib....	,,	,,	125,000		4	,,	500,000	4,000	
Do. do. dresses made up..	,,	,,	25,000		40	,,	1,000,000	8,000	
"Abee" (cloaks) woven	,,	,,	28,000		25	,,	520,000	4,160	
"Meshlah" (woollen cloaks).....	Mardeen.	Aleppo.	500		75	,,	37,500	300	
Do. do.	Homs.	,,	1,000		50	,,	50,000	400	The greater part consumed in Aleppo.
Do. black and striped.....	,,	,,	2,500		75	,,	187,500	1,500	
Cotton cloth, not dyed	Killis	,,	2,000		30	,,	60,000	480	All consumed in Aleppo.
Do. do.	Orfa.	,,	500		20	,,	10,000	80	Do.
Silk and cotton girdles.....	Homs.	,,	1,000		100	,,	100,000	800	Half to Mesopotamia.
Bath wrappers.....	,,	,,	5,000		25	,,	125,000	1,000	Do.
Red dyed cotton cloth	Orfa.	,,	5,000		20	,,	100,000	800	The cotton twist for them produced on the spot.
Printed counterpanes	Orfa and Aintab.	,,	25,000		10	,,	250,000	2,000	All consumed in Aleppo.
Persian carpets, small	Bagdad.	,,	2,000		100	,,	200,000	1,600	Do.
Do. large	,,	,,	400		500	,,	200,000	1,600	Do.
Cashmere shawls	,,	,,					500,000	4,000	Do.
							5,000,000	40,000	The greater part exported.

ARTICLES.	From whence Imported.	In what Place Consumed.	Pieces.	English Hundred-weight.	Value in Piastres Prices Current.	Per Cwt. or Per Piece.	Value in Piastres.	Value in £ Sterling.	Remarks.
Brought forward							77,554,000	620,760	
Tanned leather, yellow and red....	Diarbekir.	Aleppo.	6,000		15	per piece.	90,000	720	All consumed in
Do. do.	Mardeen.	,,		500	360	per cwt.	180,000	1,440	Do. [Aleppo.
Do. red	Aintab and Marash.	,,		1,000	600	,,	600,000	4,800	Do.
Buffalo Hides, untanned	Mesopotamia.	,,		5,000	100	,,	500,000	4,000	Do. [Mesopotamia.
Silk and cotton stuffs	Damascus.	,,	30,000		90	per piece.	2,700,000	21,600	The greater part sent to
Raw silk	Persia.	,,	Sacks 250		4,500	per sack.	1,125,000	9,000	The greater part con-
Do.	Brussa.	,,	100		12,000	,,	1,200,000	9,600	Do. [sumed.
Do.	Malatia and Diarbekir.	,,	50		10,000	,,	500,000	4,000	Do.
Do.	Beyrout and Hanah.	,,	100		6,000	,,	600,000	4,800	Do.
Do.	Antioch and Latakia.	,,	300		8,000	,,	2,400,000	19,200	Do.
Do.	Amasia.	,,	50		12,000	,,	600,000	4,800	Do.
Do.	Cyprus.	,,	50		6,000	,,	300,000	2,400	Do.
Do.	Baylan and Tarsons.	,,	150		4,000	,,	600,000	4,800	Do.
Hemp	Aleppo.	,,		500	160	,,	80,000	640	All used in Aleppo for plastering terraces and houses.
Ropes	,,	Mesopotamia and Smyrna		4,000	300	,,	120,000	9,600	About half exported.
Flints	Bezna.	Mesopotamia.	9,000,000		15	per thousand	135,000	1,080	All exported.
Tallow	Mesopotamia.	Constantinople and Smyrna.		1,000	200	per cwt.	200,000	1,600	
Soap	Aleppo.	Mesopotamia & Asia Minor.		33,000	157	,,	5,775,000	46,200	[Aleppo. 12 soap factories in
Oil	,,	Aleppo.		5,000	200	,,	1,000,000	8,000	Consumed in Aleppo.
Rice	Marash, Diarbekir, and Orfa.	,,		5,000	100	,,	500,000	4,000	Do.
Do.	Egypt.	,,		6,000	120	,,	720,000	5,760	Do.
Tobacco	Aleppo.	,,		3,000	300	,,	900,000	7,200	Do.
Do.	Antioch and Aintab.	,,		4,500	200	,,	900,000	7,200	Do.
Tombac	Bagdad.	Asia Minor.		7,500	240	,,	1,875,000	15,000	A great part exported.
Size (red)	Mesopotamia.	Aleppo.		2,000	100	,,	200,000	1,600	Used for preparing
Do. (white)	Bagdad.	,,		1,000	200	,,	200,000	1,600	Do. [cloth.
Mocha Coffee	Egypt.	,,		800	360	,,	288,000	2,340	Consumed in Aleppo.
New Copper	Tokat.	,,		600	1,300	,,	780,000	6,240	
Gold thread, silk and silver.....	Aleppo.	Turkey.	12,000		425	the packet.	5,000,000	40,000	The wire made in
Do. called "Surma"	,,	Mecca.	500		750	the lb.	375,000	3,000	Do. [Aleppo.
Do. do. brass	,,	Mesopotamia.	4,000		65	the packet.	292,000	2,340	Do.
Hardware	Constantinople and Smyrna.	Aleppo.					1,000,000	8,000	Consumed in Aleppo.

ARTICLES.	From whence Imported.	In what Place Consumed.	Pieces.	English Hundred-weight.	Value in Piastres Prices Current.	Per Cwt. or Per Piece.	Value in Piastres.	Value in £ Sterling.	Remarks.
Brought forward..							110,361,000	813,320	
Scammony	Marash.	Constantinople.		15	6,000	per cwt.	90,000	720	Half to Constantinople,
Yellow berries	,,	Aleppo.		500	160	,,	80,000	640	[half to Europe.
Indigo	Egypt and Bagdad.	,,	chests 155		20,000	the chest.	3,100,000	24,800	Consumed in Aleppo.
Horse-shoes and nails	Marash.	,,		3,750	300	per	1,125,000	9,000	Do.
Wood, unsawn	,,	,,	1,200		35	per piece.	42,000	336	Do.
Do. planks	,,	,,	125,000		3	each plank.	375,000	3,000	Do.
Do. beams	,,	,,	20,000		10	each beam.	200,000	1,600	Do.
Do. pattens	Aintab.	,,	15,000		1½	each.	22,000	180	Do.
Do. do.	Damascus.	,,	1,000		30	each.	30,000	240	Do.
Sheep	Erzeroom.	,,	head 200,000		50	per head.	10,000,000	80,000	Consumed half in Aleppo and half in Damascus.
Sulphur for sheep	Orfa.	,,		2,500	80	per cwt.	200,000	1,600	Do.
Soda and potash	Homs.	,,		15,000	40	,,	600,000	4,800	In Aleppo altogether.
Salt	Aleppo.	,,		36,000	20	,,	720,000	5,760	Do.
Fish	Antioch.	,,		2,000	100	,,	200,000	1,600	Do.
Furs, "Sensar"	Turkey in Europe.	,,	pieces 10		1,500	the fur.	15,000	120	Do.
Do. "Jilghawah"	,,	,,	,, 10		2,000	,,	20,000	160	Do.
Do. "Alma"	,,	,,	,, 10		3,000	,,	30,000	240	Do.
Do. "Weshak"	,,	,,	,, 15		2,000	,,	30,000	240	Do.
Do. "Deeb Almasi"	,,	,,	,, 120		1,000	,,	20,160	160	Do.
Do. "Naufah"	Asia Minor.	,,	,, 100		600	,,	60,000	480	Do.
Do. "Booghaz"	,,	,,	,, 50		500	,,	25,000	200	Do.
Do. "Semmoor"	Turkey in Europe.	,,	,, 10		5,000	,,	50,000	400	Do.
Do. "Selwee"	,,	,,	,, 30		600	,,	18,000	144	Do.
Do. "Batchia"	,,	,,	,, 50		500	,,	25,000	200	Do.
Do. "Lapisca"	,,	,,	,, 20		750	,,	15,000	120	Do.
Hare-skins	Mesopotamia & Syria.	Erzeroom.	skins 30,000		7	each.	210,000	1,680	The greater part sent
Castors stones	Mesopotamia.	Constantinople.	meticals 20,000		3	per metical.	60,000	480	[to Erzeroom.
Coarse cloth	Philipopoli.	Aleppo.	loads 30		10,000	per load.	300,000	2,400	
Felts	Aleppo.	Turkey in Asia.	30,000		20		600,000	4,800	Used principally in
Crucibles	Kaisseria.	Aleppo.	20,000		100		2,000	16	[baling goods.
Madder roots	Damascus.	Mesopotamia.		375	140	per cwt.	52,500	420	Used in manufacturing
Saffranon	Bagdad.	Aleppo.	lbs. 300		200	per lb.	60,000	480	[gold thread.

ARTICLES.	From whence Imported.	In what Place consumed.	Pieces.	English Hundred Weight.	Value in Piastres Prices Current.	Per Cwt. or Per Piece.	Value in Piastres.	Value in £ Sterling.	Remarks.
Brought Forward..							128,889,000	1,031,632	
Goat-hair sacking	Marash Karpoot.	Turkey.		2,500	500	per cent.	125,000	1,000	Used principally in baling goods.
Turkoman carpets	Asia Minor.	,,	10,000		100	per piece.	1,000,000		
Fruits, honey, treacle, raisins, &c...	Aleppo.	,,					3,330,000	26,640	
Pistachios	Room Kala.	,,		2,500	100	per cwt.	250,000	2,000	A little exported to France and Italy.
Ditto small	Diarbekir.	,,		500	100	,,	50,000	400	
Ditto	Aleppo.	,,		7,500	160	,,	1,200,200	9,600	
							134,912,000	1,079,556	

NOTE.—The above Prices are the average at Aleppo, and the value is calculated at pias. 125 per £ sterling. The actual value of the £ sterling in currency in the bazaars during the past year was p. 123½ and 124 pias., which will increase the amount of £1,079,556 by a piastre and a half, which would make the total amount £1,092,404.

D

PRODUCTS FROM THE INTERIOR EXPORTED TO EUROPE.

Galls, blue	Mesopotamia.	Europe.		10,000	400	per cwt.	4,000,000	32,000	One-half exported to Great Britain, and the remainder to France and Italy.
,, white	,,	,,		2,500	350	,,	875,000	7,000	
,, mixed	,,	,,		2,500	300	,,	750,000	6,000	
Madder roots	,,	,,		375	140	,,	52,500	420	
Wax	,,	,,		1,000	840	,,	840,000	6,720	
Old copper	,,	,,		1,000	700	,,	700,000	5,600	
Goats' wool	,,	,,		375	300	,,	112,500	900	Used in baling goods.
Goat-hair sacking	,,	,,		2,500	500	,,	125,000	1,000	
Cotton	Aleppo.	,,		20,000	225	,,	4,500,000	36,000	Little or no silk exported from Aleppo last year.
Wool	,,	,,		40,000	250	,,	10,000,000	80,000	
Gum Ammoniac, &c.	Mesopotamia.	,,		200	500	,,	100,000	800	
Silk cocoons	Antioch.	,,		150	3,000	,,	450,000	3,000	
Orpiment	Mesopotamia.	,,		100	300	,,	30,000	240	
Wheat	Aleppo.	,,		qrs 120,000	250	per qr.	30,000,000	240,000	
Barley	,,	,,		,, 50,000	156¼	,,	7,812,500	62,500	
Millet	,,	,,		,, 25,000	156¼	,,	3,906,250	31,250	All exported to France and Italy.
Sesame seed	,,	,,		ct. 100,000	112	per cwt.	11,250,000	90,000	
Flour	,,	,,		50,000	75	,,	3,750,000	30,000	
							79,268,750	634,030	

Besides the want of means of transport to the coast, the unhealthy climate of its port, Alexandretta, and the depreciation in the value of the piastre, are circumstances which operate unfavourably to the development of the trade of Aleppo. In regard to the first—the difficulty of engaging factors, able to transact the business, to reside there, and the confusion which results in the illness or demise of those persons, during nearly the whole year, deter many merchants from extending their operations, and are yearly causes of great loss to the mercantile community.

This can be remedied by the draining of the marshes, for the accomplishment of which a petition from all the merchants here has been sent to Constantinople. In regard to the second —that of the depreciation of the coin, the piastre has been gradually diminishing in value for many years from the value of the silver dollar, which it originally possessed—on an average 2 piastres per £ sterling every year, or in English money, $4\frac{3}{4}$d. since 1850. Ineffectual attempts have been made by edicts to stop this ruinous state of things; the great quantity of specie from Europe imported during the last war, has overbalanced all such, and the progress of this evil will only be arrested when the circulating medium has found its level.

(Signed) E. B. Barker.

REPORT ON THE EUPHRATES VALLEY RAILWAY, BY SIR JOHN MACNEILL, LL.D., F.R.S., CIVIL ENGINEER.

TO THE DIRECTORS OF THE EUPHRATES VALLEY RAILWAY.

GENTLEMEN,

Having given, in a preliminary Report, a statement of my journey in Syria, and the reasons which induced me to fix upon the proposed harbour in the Bay of Seleucia, in preference to that of Alexandretta, the present shipping port and harbour for vessels trading between Europe and that part of the East; and having also given a general description of the country which I thought most suitable for the construction of a Railway between the Mediterranean Sea and the River Euphrates, I need not again allude to these particulars, but confine myself solely to a description of the line of Railway I would recomimend as the best between the harbour and the Euphrates, which I am now enabled to do, having just received from Mr. Telford Macneill the tracings of the trial surveys, which I left him to complete. When the detailed surveys are finished, which he and Mr. Howe are now engaged upon, it may be found necessary or advisable to make some slight alterations in the gradients, and some deviations from the present proposed line, in order to save expense in the formation of the work; but for every practical purpose the present survey is sufficient to form a very near approximate estimate of the cost of the construction, and also to give a correct description of the line, and the cuttings, and embankments, and other works that will be required, as also of its various curves and gradients; all of which, I am happy to say, are favourable, and such as can be worked with economy

and safety. The cuttings and embankments are in general very moderate, so that the work will be suitable for the employment of the native population, and can be carried on by them with the assistance of a few European workmen, and experienced foremen and gangers.

The country through which the line will pass being very different in its physical character as regards facility of construction in different localities, I think it is desirable to divide the whole line into seven divisions, and to estimate the cost of each separately; by which means a more correct mileage average of the cost of construction will be obtained than would otherwise be possible.

These divisions will comprehend—

	Miles.
1. From the harbour to Antioch, a distance of ..	20
2. Antioch to Sansarin, a distance of	30
3. Sansarin to Dana, a distance of	7
4. Dana to Terrib, a distance of	8
5. Terrib to Chan Tuman	13
6. Chan Tuman to Aleppo	12
7. Aleppo to the Euphrates	60
In all	150

FIRST DIVISION.—FROM THE HARBOUR TO ANTIOCH.

The first of these divisions commences close to the landing-place on the east side of the proposed harbour, and will run in a northerly and nearly straight direction across the low ground for a distance of four miles, passing about a mile to the eastward of the grain stores and landing-pier of Suedea, on the western bank of the Orontes. The greatest height of embankment in this length will be 15 feet, and the greatest depth of cutting 20 feet. The gradient will be 1 in 609 for a mile, and the remaining three miles will be horizontal. At the fourth mile, the line curves towards the east, with a radius of two miles, and continues for three miles along the east side of the Orontes, the embankment being about 10 feet, and the greatest cutting 12 feet—the gradients being horizontal and 1 in 140.

Near the end of this length, at seven miles from the harbour, the line will cross the river Orontes by a flat iron bridge. Immediately after crossing the river, there is a narrow elevated neck of land, of about 200 yards in width and 130 feet in height, which must be cut through or tunnelled. The line then continues in nearly the same course for a mile farther. In this mile the River Orontes would require to be crossed four times, and a gallery or tunnel of 150 yards in length would be required to pass through a nearly vertical rock; but it will be less expensive to cut a new channel for the river, of about one-fourth of a mile in length, which will save the four bridges, and be better in every respect. The gradient for this mile will be 1 in 552. From the eighth to the ninth mile, the line will run on the West side of the river, curving gently to the north-east. The greatest cutting and embankment will not exceed four feet on this mile, the gradient being the same as the last, viz., 1 in 552. From the 9th to the $10\frac{3}{4}$th mile, the line will run in nearly an easterly direction along the north side of the river. At the 10th mile, a new channel for the river, of 200 yards in length, must be cut, or rather the present one widened out. On this portion of the line the cuttings and embankments will not exceed 5 or 6 feet in any place, and the gradients will be 1 in 818, and 1 in 172 for a short distance. Between the $10\frac{3}{4}$th mile and the 11th mile, the River Buyuk-Kara-Chai, a tributary to the Orontes, must be crossed nearly at right angles by a flat iron bridge of 40 feet span; and a bank or knoll of earth and rock, of about 60 feet high and 300 yards in length, must be cut through. The gradient on this length will be 1 in 172. From the 11th to the 13th mile, the line runs nearly due east, crossing the River Orontes three times, by iron lattice bridges of 60 feet span. The heaviest cutting in these two miles will be 20 feet for a short distance, and the highest embankment will be 6 feet, the gradient being 1 in 460. Four villages are close to this part of the line. From the 13th to the 16th mile, the general course of the line will be in gentle curves. On these

three miles there will be a cutting of half-a-mile in length, varying from 15 to 35 feet in height. The Orontes will be twice crossed by lattice bridges; and there must be three culverts for streams, one for a mill-race, and three road bridges, in the cutting before mentioned. The embankment in this length will be about 8 feet, and the gradients will be 1 in 460 and 1 in 180. From the 16th to the 20th mile, which reaches the town of Antioch, the line runs in nearly a north-easterly direction, passing close to the village of Sassa and several detached dwellings. In this distance the River Orontes is twice crossed by lattice bridges. The deepest cutting on this length will be 40 feet for 300 yards, and another, varying from 15 to 30 feet, for half-a-mile. The depth of embankment will be about 30 feet. The gradients will be 1 in 132 and 1 in 334. At the 19th mile, the line passes close to a road bridge and the river; and at the 19 mile 2 furlongs, between the mills and the old barrack; and at the 19 mile 3 furlongs, close to the old palace of Ibrahim Pacha, which could be converted, at a small cost, into an excellent and commodious station for the town of Antioch. From the Pacha's palace, the line will run along the side of the river to the west of the town, crossing the old Roman bridge and street leading to the town, and from thence close to the rear of the new barracks, on an embankment nearly 25 feet high.

SECOND DIVISION.—FROM ANTIOCH TO SANSARIN.

From Antioch to Sansarin—a distance of fifty miles from the harbour and thirty from Antioch—the line will be almost perfectly straight, running in an easterly direction, passing over the plains of Antioch and the flat ground along the Afrin river, requiring scarcely any work beyond that of an embankment formed from the cuttings of the drains on each side. The line will cross the Orontes about two miles to the west of Jesr Hadid, and midway between it and the Lake of Antioch. The first eleven miles will have a uniform gradient of 1 in 1,712; the next twelve miles to Ennishere, 1 in 487;

and the remainder of the distance, seven miles, to Sansarin, will rise 1 in 340.

THIRD DIVISION.—FROM SANSARIN TO NEAR DANA.

From Sansarin to the summit of the line on the planes of Dana, a distance of seven miles, the line crosses to the south-east, passing through the valleys, ravines, and glens of this beautiful mountain pass, where it attains an elevation of 1,120 feet above the level of the Mediterranean Sea. The cuttings on these seven miles will vary from 6 to 10 feet in rock, and in two points there will be short cuttings of from 70 to 80 feet. The embankments will vary from 30 to 35 feet in height; but, to compensate for this, there will be from three to four miles with scarcely any cutting or embanking. The gradients will be 1 in 92 for 1½ miles, 1 in 65 for 2½ miles, and 1 in 60 for 3 miles. At the summit the line passes between the villages of Dana and Izri, and about 1½ miles to the west of Terminin.

FOURTH DIVISION.—FROM DANA TO TERRIB.

From the fifty-seventh to the sixty-first mile, a distance of four miles, the line runs nearly due south to the old Roman road, not far from the large village of Talak Berin. On these four miles there is scarcely any cutting or embankment. The gradient will be horizontal for two and a half miles, and then there will be a descending gradient of 1 in 126 for a mile. From Talak Berin to Terrib, a distance of four miles, and sixty-five miles from the harbour, the line will run nearly due south until it comes near to Terrib, where it curves towards the south-east. The cuttings and embankments on these four miles will be very moderate, with a descending gradient of 1 in 85.

FIFTH DIVISION.—FROM TERRIB TO CHAN TUMAN.

This division is thirteen miles in length. The line will pass through the rich plain of Terrib, curving to the east, and

passing the villages of Sheark Alli, Elzara, and Yaff-Dolie, to the northward of the line, and about one mile distant. There will be very little work on these thirteen miles except fencing and forming. The gradient will be about 1 in 3,432 for the whole distance. Chan Tuman is seventy-eight miles from the harbour, and twelve from Aleppo.

SIXTH DIVISION.—CHAN TUMAN TO ALEPPO.

The direction of this part of the line is nearly north-east. It passes through the valley of the Chalcis, and not far from that river, through ground easy to work, and at a height of about thirteen feet above the surface of the water in the river. The cuttings and embankments are very trifling on the whole of this division. The gradients are 1 in 176, 1 in 165, and 1 in 85, to the terminus of the town of Aleppo, which is just ninety miles from the harbour, and at an elevation of 1,147 feet above the level of the Mediterranean Sea. The place where the line passes close to Aleppo is well suited for a station, and is most conveniently situated both for a passenger and goods traffic, and has abundance of excellent water. The station will be near one of the gates, and not far from a large mosque. There is ample space to build stores, engine-houses, sheds, and every requisite for a considerable trade.

SEVENTH DIVISION.—FROM ALEPPO TO THE EUPHRATES.

The line can be continued on from the station at Aleppo to the Euphrates; or it may branch off from near Chan Tuman, if it be thought more desirable: but I have assumed that it will go direct from Aleppo. The distance to the Euphrates from Aleppo will be about sixty miles. It has not been as yet surveyed; but, as seen from the high ground and castle of Aleppo, it appears one uniform plain as far as the Salt Lake; and, from the information of General Chesney, and those who are acquainted with the country, it is equally level the remainder of the way, requiring little or no cutting or embankment. The expense of construction will therefore

be low, but I have assumed it to cost £6,000 per mile, which is £1,400 per mile more than the average of the line from Antioch to Sansarin.

From the foregoing it will be seen that the most expensive part of the line will be from the harbour to Antioch, a distance of twenty miles, and from Sansarin to Terrib, a distance of fifteen miles, making together thirty-five miles. The remaining portion of the line, through the plains of Antioch, Dana, Terrib, and the valley of the Chalcis, making in all a length of sixty-five miles, can be executed at a very moderate rate.

Allowing a moderate compensation—say £20,000—for the private property that may be injured by the work, I estimate the expense of the construction of the railway as follows, exclusive of land now in possession of the Turkish Government, which I understand is to be granted to the Company free of charge, and not calculating on any outlay for the construction of the harbour, which will cost £250,000, as the Turkish Government have determined to construct it themselves, and with their own funds.

First Division.—From Harbour to Antioch, 20 Miles.

1. Fencing	£ 4,000
2. Earthwork	80,000
3. Rockwork	31,500
4. Forming, cutting Trees, &c.	2,000
5. Ballasting and Boxing	10,000
6. Masonry and Bridges	30,000
7. Crossings	1,500
8. Permanent Way	40,000
9. River Channels	10,000
10. Gallery or Tunnel	15,000
11. Yards and Stores at Harbour	8,000
12. Station at Antioch	2,000
13. Intermediate Station	500
	£234,500
Add 15 per cent., say	35,175
	£269,675

Second Division.—Antioch to Sansarin, 30 Miles.

1. Fencing, Forming, and Earthwork	£ 30,000
2. Ballasting	21,000
3. Masonry	12,000
4. Permanent Way	60,000
5. Stations	5,000
	£128,000
Add 10 per cent.	12,800
	£140,800

Which is at an average rate of £4,693 per mile.

Third Division.—From Sansarin to Dana, 7 Miles.

1. Fencing	£ 1,232
2. Earthwork	49,500
3. Ballasting	3,500
4. Masonry	7,000
5. Crossings	1,400
6. Stations	1,000
7. Permanent Way	14,000
	£77,632
Add 15 per cent.	11,644
	£89,276

Which is at an average rate of £12,754 per mile.

Fourth Division.—From Dana to Terrib, 8 Miles.

Fencing	£ 1,458
Earthwork	35,000
Rockwork	10,000
Ballasting	4,000
Masonry	8,000
Crossings	1,600
Station	1,000
Permanent Way	16,000
	£77,008
Add 15 per cent.	11,551
	£88,559

Which is at an average rate of £11,070 per mile.

Fifth Division.—From Terrib to Chan Tuman, 13 *Miles.*

Fencing	£ 2,288
Earthwork	39,000
Ballasting	6,500
Masonry	15,000
Crossings	2,600
Stations	2,000
Permanent Way	26,000
	£93,388
Add 10 per cent.	9,339
	£102,727

Which is at an average rate of £7,902 per mile.

Sixth Division.—Chan Tuman to Aleppo, 12 *Miles.*

Fencing	£ 2,112
Earthwork	36,000
Ballasting	6,000
Masonry	18,000
Crossings	2,400
Stations	8,000
Permanent Way	24,000
	£96,512
Add 10 per cent.	9,651
	£106,163

Which is at an average rate of £8,847 per mile.

ABSTRACT.

No. 1.	Harbour to Antioch	£269,675
2.	Antioch to Sansarin	140,800
3.	Sansarin to Dana	89,276
4.	Dana to Terrib	88,559
5.	Terrib to Chan Tuman	102,727
6.	Chan Tuman to Aleppo	106,163
	Total distance, 90 miles	£797,200

Which is at an average rate of £8,858 per mile.

Assuming that the line from Aleppo to the Euphrates can be constructed at an average cost of £6,000 per mile, which, in the absence of a detailed survey, I believe will be found ample for the purpose—the cost of the Division No. 7 will be £300,000; and, this added to the cost of the line from the harbour to Aleppo—viz., £797,200, the total amount will be £1,097,750; which will leave a balance of £302,800 for the purchase of rolling stock, engines, interest to share-holders during the construction of the line, damage done to private property, and other incidental expenses. It is not certain what this latter item may be, but I do not think it can exceed from £20,000 to £30,000; the large margin, however, of £302,800 is more than ample for all the above purposes.

The line from the harbour to Antioch, and from Sansarin to Terrib—comprehending the 1st, 3rd, and 4th Divisions—will take the longest time to complete. I would, therefore, recommend that the works should be commenced between the harbour and Antioch; and as many of the native population as can be procured should be employed on the easiest description of the work, and removed by degrees to that which is more difficult, as they become accustomed to such labour. In a few months they will become expert and efficient workmen, and may then be transferred to the 3rd and 4th divisions, between Sansarin and Terrib.

The works between the harbour and Antioch, and between Sansarin and Terrib, could easily be executed in two years in this country; and the 55 miles through the plains of Antioch, Dana, and Terrib, and the 60 miles to the Euphrates, could be executed in one year: but it will be safer to reckon upon four years as the period for completing the works to Aleppo—that is, double the time that similar works would take in England.

The returns that may be expected from the traffic over the line, when it is completed, will be very considerable. Reckoning on the present existing traffic alone, exclusive of passengers,

it will pay a dividend of 8 per cent.; and there can be no doubt but the facility of transit that will be afforded by the railway will increase the traffic to a very great extent—probably to twice or thrice what it is at present.

By a careful return of the number and size of vessels that entered the harbour of Alexandretta in 1855, as made out by the consul residing at that port, there appear to have been vessels the registry of which amounted to 59,000 tons; but, as some of these entered in ballast, and some not fully laden, it will be more correct to take the return furnished by Mr. Barker, Her Majesty's Consul at Aleppo, which shows that 50,533 tons were exported in that year from Aleppo (*see Table No.* 1), and the same amount of goods imported, besides the imports to Aleppo from the interior, which, according to Mr. Kennedy, amount annually to 181,000 tons, the value of which is stated to be £1,250,000, of which £444,689 are from Great Britain, while that of the imports amounts to £1,050,000.

I have not, however, reckoned upon more than 50,000 tons carried each way, in each year, along the whole line, though the existing traffic at the present moment is considerably beyond that amount; nor have I taken any credit for passenger traffic, which will amount to a considerable item in the annual revenue, especially when the line becomes available for the transit of passengers and soldiers from Europe to India. The traffic in goods at present existing between Aleppo and the sea, as above stated on the authority of the consul, amounting to 50,533 tons each way, is confirmed by the information I obtained at Jesr Hadid, on the Orontes, where there is an old Roman bridge and a toll-bar; where I was assured that 10,000 loaded camels, horses, and mules passed weekly between the interior of the country and the harbours of Alexandretta and Suedea. If we assume that five of these animals, on an average, carry one ton, the amount would be 2,000 tons per week, or 104,000 tons annually: a

little more than what is given by Mr. Barker from a more correct and accurate source of information.

The lowest charge at present for conveying goods from Aleppo to the harbour of Alexandretta is stated by Mr. Barker, the consul, to be from £3. 6s. 8d. to £6. 13s. 4d. per ton; and, for wheat, 18s. 5d. to £1. 6s. 5d. per quarter; which is rather more than the average value of the wheat sold in the market of Aleppo: and this statement is fully borne out by Mr. Kennedy, a merchant residing in Aleppo, who informed me that the charge for conveying goods from Aleppo to Alexandretta often costs as much as from £6 to £7 per ton, and that the time of transit varies from ten to twelve days, and often much longer; and that the injury the goods sustain by the present mode of carriage is very great—the loss being often as much as from 7 to 15 per cent., besides the delay and uncertainty of receiving imported goods, and sending others down to the harbour for exportation, in time for the sailing of steamers and other vessels. The lowest of the above charges—viz., £3. 6s. 8d. per ton to Alexandretta from Aleppo—gives 10d. per ton per mile, and in some cases 1s. 8d. to 2s. per ton per mile.

If, therefore, we suppose the railway charges to be only 4d. per ton per mile from Aleppo to the harbour at Suedea, a distance of 90 miles, the cost of carriage of a ton would be £1. 10s. only, as compared with £3. 6s. 8d., the present lowest charge. Taking the present traffic at 50,000 tons only, as passing annually each way between Aleppo and Suedea, the gross receipt on this tonnage would amount to £150,000. There are no means of ascertaining at present, beyond what are given in Mr. Barker's report, the amount of traffic that may be expected on that portion of the line between the Euphrates and Aleppo; but, considering that Aleppo is the entrepôt of all goods passing and repassing to and from Bagdad, Mosul, Persia, and Mesopotamia to Europe, there must be a very large amount of traffic—probably fully as much as that which passes between Aleppo and the har-

bour; but, taking it at only three-fourths that amount, and charging the same mileage rate, the annual gross receipts of this part of the line between Aleppo and the Euphrates will amount to £75,000. This sum, added to the former one of £150,000, will amount to £225,000 for the total gross receipts of this first division of the Euphrates Valley Railway. The working expenses must, for some time at least, be high, as coal will have to be imported—the freight of which, until vessels are certain of getting a return cargo, will probably be as much as £2. 10s. per ton: it will not, therefore, be safe to reckon the working expenses at less than 50 per cent. of the gross revenue, or £112,500. This would leave £112,500 for dividend, which would be about 8 per cent. on the outlay of £1,400,000.

There cannot, however, be a doubt that, when the facilities of railway transit are opened to this rich district of country, the traffic will increase to an enormous extent. Mr. Barker, Mr. Kennedy, and others, assured me that, if there were any means of sending the produce of the country to the harbour, cotton, wheat, barley, and tobacco would be grown to five or six times what they are at present; but, supposing the increase of the present traffic to be only doubled, the rate of dividend would be greater than that of any railway in Europe at the present day.

The first twenty miles of this railway will pass through the most beautiful country imaginable, including the romantic scenery of Daphné, so celebrated for its rocky glens, waterfalls, and flowering shrubs. The high rocky cliffs on one side of the valley through which the railway will pass, and the undulating hills on the other side, crowned with myrtle, oleander, broom, boxwood, and flowering shrubs, cannot be surpassed for beauty and grandeur in any part of the world. There are also great numbers of mulberry-trees in this district, which are cultivated for the silk-worms, which are propagated here to a great extent.

The plain of Antioch, through which the line passes for 30

miles after leaving that city, is a rich alluvial soil, capable of producing luxuriant crops of grain, Indian corn, wheat, cotton, and tobacco ; and the plains of Dana and Terrib, which will also be traversed by the railway for nearly 30 miles more, are of the same luxuriant character. The whole of the plains are in a very primitive and miserable state of agriculture. If anything like ordinary farming were introduced into these districts, I have no doubt the produce would be fourfold what it is at present. The land is never manured, and the ploughing is nothing more than a scrape along the surface, of from two to four inches in depth, and at intervals of twelve or fourteen inches apart ; so that the land is never turned up, nor the seed properly covered, which, in such a warm and parched country, is essential to its growth. If these plains, through which the railway will pass for 60 miles, and which are from 30 to 40 miles in width, were properly cultivated, the amount of produce that would be exported would be very considerable as compared to the present quantity ; and the more that is produced, the more the railway must benefit, and the greater will be the dividend for the shareholders. I feel, also, well assured that the working expenses, after a few years, will be much diminished, by the introduction of fuel at a cheaper cost, which will also add materially to the dividend.

I am, Gentlemen,

Your most obedient Servant,

JOHN MACNEILL.

TABLE No. I.

Produce from the Interior Exported to Europe in 1855.

Articles.	From whence Exported.	Tons English.	Value in Pounds Sterling.	Remarks.
Galls, Blue	Mesopotamia	500	£32,000	One-half exported to Great Britain, and the remainder to France and Italy.
,, White	,,	125	7,000	
,, Mixed	,,	125	6,000	
Madder Root	,,	18	420	
Wax	,,	50	6,720	
Old Copper	,,	50	5,600	
Goats' Wool	,,	18	900	Used in baling goods
Goat's-hair Sacking	,,	125	1,000	
Cotton	Aleppo	1,000	36,000	Little or no silk exported from Aleppo last year
Wool.....	,,	2,000	80,000	
Gum Ammonia ..	Mesopotamia	10	800	
Silk Cocoons	Antioch	7½	3,000	
Orpiment	Mesopotamia	5	240	
Wheat	Aleppo	24,000	240,000	
Barley	,,	10,000	62,500	
Millet	,,	5,000	31,250	All exported to France and Italy
Sesame Seed	,,	5,000	90,000	
Flour	,,	2,500	30,000	
		50,533½	£633,430	

The whole of this 50,533½ tons would be carried over the railway from Aleppo to the Harbour, and the greatest part of it over the line from the Euphrates to Aleppo previous to its going to the Harbour.

Mr. Barker also states that there are, besides, sundry articles, amounting in value to £150,000; and the internal trade to Constantinople, Smyrna, &c. &c., amounts to £485,630, which, added to £633,430 as above, gives a total of £1,254,130.

MEMORANDUM by SIR JUSTIN SHEIL, K.C.B., on the Political Advantages of the Euphrates Valley Railway, with Reasons for a minimum rate of Interest being guaranteed by Government.

THE guarantee of the British Government of 4 per cent. on £1,400,000 for the Railway from the Mediterranean to the Euphrates (100 miles) may be called nominal rather than real.

For Turkey has guaranteed 6 per cent. England does not bind herself absolutely to pay 4 per cent., but only such portion of 4 per cent. as Turkey shall not pay. Thus, if Turkey should pay 2 or 1 per cent., England is liable for 2 or 3 per cent., as may be.

But the customs on the imports and exports between the mouth of the Orontes and Aleppo, are alone sufficient to cover the above 6 per cent., for in 1854 the sum remitted by the Pasha on this account to the Porte was 17,000 purses or £85,000.

From official *data* it is ascertained that the amount of tonnage in merchandise between Aleppo and its Port in the Mediterranean (Scanderoon) exceeds 100,000 tons; the cost by camel is on an average £4 a ton; by rail it would be £1. 10s., consequently the rail is sure of a preference.

Thus the probability of England being called on to pay any portion of the guarantee is diminished to almost nothing. Still a guarantee is requisite to prevent the whole scheme from falling to the ground, as otherwise the moneyed interest will not come forward.

The cost from the Mediterranean to the Euphrates (100 miles direct—150 by rail) is on an average about £7,000 a mile; that is, £8,858 per mile to Aleppo, and £6,000 a mile from Aleppo to the Euphrates.

The cost of the remainder of the line, for which, however, England is in no shape responsible, though Turkey is, will amount, it is supposed, to about £6,000 a mile.

We know that Mahomed Ali Pasha held the tribes under complete control by vigilance and activity. We know too, from the experience of Layard, Loftus, Rawlinson, Williams, &c., who employed the Arabs in great numbers on excavations, that these tribes are as accessible as other people to fair treatment and regular payments.

The fertility of Babylonia is proverbial. The plains of Antioch and Aleppo are described to be equally luxuriant by culture. All that is required to procure almost unlimited quantities of corn, is fair Government security of property, and an outlet. It is believed that, by means of a Railway, corn from Babylon could be landed in England at a lower cost than from Odessa. The other productions are cotton, rice, silk, oil, &c.

The Railway will strengthen England and Turkey.

It will strengthen Turkey by drawing together the distant portions of its Asiatic dominions. Bagdad, Bussorah, Moosul, &c., which the Porte has hitherto felt to be almost beyond its control, will be as subject as Smyrna, and the resources of these distant tracts will be available for the defence of the empire, which can hardly be said was the case in the late war. No doubt, in time, branch railroads will be made from Aleppo, or from the terminus at the Euphrates, to Dearbekr and the Black Sea, or even to Constantinople. It requires no explanation to see that the condition of Turkey with reference to the defence of the eastern portion of her Asiatic dominions will then be very different from what they were in the recent war.

It can hardly be doubted that Kurachee is destined to be the great arsenal of the Punjab and North-Western India—perhaps the emporium, and even the real capital of British India.

Kurachee by the Euphrates is 1,400 [illegible]

land than Bombay is by the Red Sea. Moreover, Kurachee is free from the influence of the South-West Moonsoon, for sailing vessels entering the Persian Gulf; whereas sailing vessels from Bombay are almost unable, during that season, to enter the Red Sea. It is asserted that troops and military stores could be conveyed from England to Kurachee in from 20 to 25 days.

Bombay by the Euphrates is 900 miles nearer to England than by the Red Sea.

It is evidently far from impossible that Egypt should side with France in a contest between us and the latter country. The Red Sea would be then open to France and closed to us. But it is very unlikely that both Turkey and Egypt should simultaneously join against England.

With this trunk line, when branch lines are drawn towards Samsoon and Trebizonde, India will be able to contribute to the defence of Turkey in Asia.

More might be added on this part of the subject, were it not believed to be unnecessary.

The advantages of this line are, therefore, it is conceived, very numerous. As far as I can discern there is but a single evil. It seems possible that a state of affairs might arise by which it would be France instead of England which would transmit troops and stores by this line. Persia would thus be brought within reach of France. But this remote speculation ought not to counterbalance the many advantages which this line opens to view.

(Signed)

JUSTIN SHEIL.

TABLE.

London to Malta, by Marseilles			1,648
Malta to Alexandria..	980	}	1,228
Alexandria to Suez	248		
Suez to Bombay			3,481
London to Bombay, by Red Sea			6,357
London to Malta			1,648
Malta to Orontes (Western Terminus)			1,210
Orontes to Korna (Eastern Terminus, Junction of Tigris and Euphrates)			763
Korna to Kerachee (Indus), by Steamer			1,352
London to Kerachee, by Euphrates			4,973
Difference in favour of Euphrates			1,384
London to Bombay, by Red Sea			6,357
London to Bombay, by Euphrates and Persian Gulf			5,445
Difference in favour of Euphrates			912

REPORT of the EVIDENCE in the COMMITTEE of the HOUSE of COMMONS on the EUROPEAN and INDIAN JUNCTION TELEGRAPH COMPANY. (*Corrected.*)

Jovis, 28° die Maii, 1857. LORD STANLEY IN THE CHAIR. Agents for the Bill, Messrs. Deans and Rogers. Counsel, Mr. Burke and Mr. Melvill.

The Petition of the Electric Telegraph Company against the Bill was read. Agent, Messrs. Dyson and Company.

Mr. BURKE was heard to open the case on the part of the Promoters of the Bill, after which he called the following witnesses:

Sir WILLIAM BROOKE O'SHAUGHNESSY, *called.*

Examined by Mr. BURKE.

Q. It is under your care, if I rightly understand it, that the Telegraph communication now existing in India has been carried into effect?

A. Yes.

Q. How many miles have you there

A. More than 4,000 miles.

Q. Have those lines of telegraph that you have laid down in India been in many places through States comprised of tribes in a barbarous state?

A. Yes.

Q. I have omitted to mention the names. Was there one in Burmah, from Rangoon to Meaday, about 200 miles in length?

A. Yes.

Q. How long have your telegraphs in India been in operation?

A. We commenced the construction of the line in November, 1853.

Q. How long have they been opened?

A. They have been in public operation two years.

Q. During that time have you found any damage done to the wires by the natives?

A. There have been a very few instances. I may say not half a dozen instances.

Q. Were those easily remedied?

A. Yes, lasting but a few hours.

Q. What is the system of superintendence?

A. It varies in almost every country.

Q. Would you employ the natives?

A. Very much in the construction of the line; and all through British India, properly speaking, the custody of the line is under the native police.

Q. With British superintendence over them?

A. Yes.

Q. Now, judging from analogy, do you think that the same immunity would exist in the telegraph communication through Turkey and through the Euphrates?

A. I am speaking now from opinion merely. I have not been in the country myself, but, as far as one may judge, I should think there would be no serious difficulty.

Q. What time do you think will enable you to carry it out?

A. Starting fairly, and having the stores distributed, I think two years an ample length of time.

Q. And as to the cost?

A. As to the cost, I speak with considerable reserve. There are many items that I am not competent to give accurate information upon; but, if I double the expense of the lines in India, I think I am safe. It appears to me that the construction of the line is fairly within the disposable capital of the Company.

Q. As much as £180,000?

A. Yes.

Q. What was the cost of the line in India?

A. Under £50 a mile.

Committee.—What is the length of the line?

A. I estimate the length of the line at one thousand miles.

Mr. Burke.—Have you surveyed the country yourself?

A. No.

Q. Have you read the Report from which I read a considerable portion—Mr. Ainsworth's?

A. Yes, I have read that Report, and I think it gives clear information.

Q. I believe no man is more competent to speak on the subject than Mr. Ainsworth?

A. Mr. Ainsworth and Mr. Lynch are certainly, I conceive, the highest authorities upon the subject.

Q. Mr. Lynch is a gentleman who has resided in Bagdad?

A. Yes.

Q. And has been advising the Company as to the nature of the country?

A. I myself look with the greatest possible confidence upon Mr. Lynch's opinion and advice.

Q. Have you any doubt, after the advice of these gentlemen and from your knowledge of what has taken place in India, that you will be able to maintain this line of telegraph with perfect immunity from the inroads of the population?

A. It is impossible to speak with certainty upon such a subject, but I look upon it as highly probable that there will be perfect immunity.

Q. Do you approve of the mode suggested by Mr. Ainsworth, that the local Sheikhs should be superintendents of the line?

A. Yes, certainly.

Q. Employing the native population, so far as is possible, in the construction of the line?

A. I should say, almost exclusively.

Q. We are given to understand that if it is under the protection of their own sovereign, the Sultan, it will be more safe?

A. That is a subject upon which I should not offer an

affirmative opinion, for I believe the Arabs wish to be independent.

Examined by the Committee.

Q. How do you recommend a line of that kind to be constructed?—under-ground or upon posts?

A. It should be a mixed line. In the turbulent part of the country I should put it under-ground, and go to a considerable expense in its construction; but, generally speaking, the line may be constructed over-ground, as has been done in India for almost the entire length of the line.

Q. Have you taken precaution in burying the line in any of the works in India?

A. Yes, and a very useless precaution it was. I allude to the section between the Indus at Attock and Peshawur. I was afraid of the Affreedees. The line was badly constructed, and we put up an over-ground line merely as a *pis aller*. No one has meddled with this, so we incurred all the expense of the subterranean line to no purpose.

Q. At what have you estimated the cost of this line—double that of the Indian?

A. I take that as an approximation. It cannot exceed it.

Q. Then you would say £100 a mile?

A. £100 should cover the average expenses. Besides the construction of the line, there are other expenses, such as stations and the construction of cables.

Q. Was it ascertained what the mischief done to the line in India arose from—was it from the superstitions of the people?

A. No; the mere mischief of drunken people in all cases I can recollect.

Q. From the Hindoos or Mahomedans?

A. On one occasion from the Mahomedans. There was a great festival of the Mohurrim, and they wanted to carry their tazeas across the line, and they insisted upon the line being taken down to let them pass. After that we constructed

it high enough to allow the tazcas to go under without touching or being lowered. The tazea is a lofty model tomb.

Q. You have no acquaintance with the Arab tribes through this line ?

A. None.

Q. You speak generally from Indian experience ?

A. Yes.

Q. Is it a fact that, in the insurrection called the Santal, they injured the railway and did not injure the telegraph ?

A. Yes; we paid the people of the country regularly and treated them kindly, and they never meddled with us.*

* The following is the memorandum of Sir W. B. O'Shaughnessy, sent to the Promoters :—

I have superintended the construction of over 4,000 miles of Telegraph line in British India ; in every variety of country, climate, and population.

In many places the lines run through independent native States, and among half-savage tribes, such as the Bheels of Malwah, Santals of Bengal, and Afreedies beyond the Indus.

In three years' experience we have not had more than four or five instances of wanton damage to any part of the line. During the Santal insurrection it remained entirely unharmed.

I attribute this immunity very much to an absence among the natives of any love of mischief, to the material employed in the lines being inapplicable to any of the ordinary requirements of the people, and to the employment of great numbers of native labourers in the construction, repairs, and conservation of the lines.

I am of opinion that by the employment of military officers of experience in Oriental countries, of proved good temper and discretion, by employing local labour on liberal terms, and by engaging the sons or kinsmen of the powerful Arab chiefs as inspectors of the lines, these may be constructed as rapidly, as cheaply, and as safely as has been done in India. I think two years should be sufficient to complete the line, after the stores have been distributed, and commencing work in the month of October after such distribution. I am further of opinion that a very moderate sum will cover the annual expense incurred by retaining the services of the Arab chiefs.

THOMAS LYNCH, Esq., *called. Examined by* MR. MELVILL.

Q. I believe you are a member of a mercantile firm in Bagdad ?

A. Yes.

Q. Have you, in the course of your dealings, had much communication with tribes in the neighbourhood of the Persian Gulf and elsewhere ?

A. We established a house at Bagdad in 1838, and have carried on mercantile communication with the tribes entirely between Aleppo and Bagdad.

Q. Bagdad is in the suburbs of the Arabs ?

A. Yes.

Q. What is your opinion of them generally with reference to an undertaking of this description ? In constructing it would they be liable to do any damage, or would they keep it intact ?

A. I think, if proper relations were opened with the Arabs, they would be just as amenable as other parties, both in protecting and carrying out the line.

Q. Whether employed in constructing it or not ?

A. Yes. Of course the Arabs themselves—the Bedouin Arabs—will not work with the spade and the shovel, but the Fellah Arabs will do so—or cultivating Arabs.

Q. Are you aware whether there are any obstacles in the country to interfere with its construction ?

A. I have ridden over the line several times, and, from my experience and knowledge of the country, I do not think there is any physical difficulty, if proper relations are opened with the Arab tribes.

Q. Do you think any accident would happen, if proper measures were adopted to prevent it, either in the course of its construction or otherwise ?

A. A slight accident might happen, but not more than those which were reported to have occurred in India.

Q. If you have the countenance of the Arab Sheiks?

A. Yes.

Q. You think that might be obtained very easily?

A. The proposed line would scarcely run through the actual Bedouin territory at all.

Q. It would not go through the Bedouin territory?

A. Through a very small part of it.

Q. Where is the Bedouin territory?

A. To the west of the Euphrates, near and below Bagdad, and to the east of the Euphrates as you go north towards Mosul. The Bedouins there cross the Euphrates, and their territory extends close to the town of Mosul itself.

Q. In what direction would you recommend this telegraphic communication to be made?

A. I should say it would be carried along the line proposed to be taken.

Q. That is, along the line proposed to be made?

A. Yes.

Q. Is it likely to be of general importance both to the country through which it goes, and also to this country?

A. Yes, certainly.

Q. And to the mercantile community?

A. Bagdad is a place of great importance itself. Its trade with India is very great.

Q. Are not various Arab tribes frequently at war with each other?

A. Yes.

By Lord Stanley.—Supposing that one tribe had been subsidised, and part of the line placed under the protection of the Sheikh of that tribe, might it not suffer injury by the enemies of that tribe?

A. I should think not, because there are only two or three large tribes. With those tribes friendly relations should be opened; and then, in their petty feuds, they would not interfere with the telegraph.

Q. You think it could be placed under the protection of all?

A. Yes. There are only two or three altogether.

WILLIAM AINSWORTH, Esq., *called. Examined by* Mr. BURKE.

Q. I believe you were naturalist to the Euphrates Expedition?

A. Yes.

Q. And you were afterwards sent out by the Geographical Society to the same countries?

A. Yes.

Q. Did you accompany the Expedition upon the Euphrates?

A. Yes.

Q. What year was that in?

A. From 1835 to 1838.

Q. Have you subsequently been employed by the Geographical Society in making geographical inquiries in that district?

A. Yes; for three or four years.

Q. Are you generally acquainted with the geographical features of the country?

A. Pretty intimately.

Q. Are you also acquainted with the general character of the tribes occupying this district?

A. Yes.

Q. Without troubling the Committee with going into detail, you are the author of a Report addressed to the Directors of the Company with reference to the practicability of an Electric Telegraph, and the probability of its being maintained free from immunity hereafter?

A. I am.

Q. That report you are prepared here to support?

A. Yes.

Q. I believe you have it before you?

A. Yes. Will you allow me to make one observation with

regard to that report? It was written at a time when it was thought the line would be taken across the Bedouin country. That idea is abandoned, and it is now proposed to take the line of the great road through those parts, which is the ordinary course which the traffic takes; and by the line now proposed there will be scarcely any connection with wandering tribes of any kind, either Arabs or Kurds. It will go through a settled country, a country which is thickly inhabited, and almost entirely cultivated throughout.

Q. Does it skirt the Bedouin country?

A. It does not come within fifty miles of the Bedouin country.

The following Report was then handed in:—

REPORT on the Feasibility of establishing TELEGRAPHIC COMMUNICATION between the MEDITERRANEAN SEA and the PERSIAN GULF, addressed to W. P. Andrew, Esq., Chairman of the European and Indian Junction Telegraph Company, &c. &c. &c.; by William Ainsworth, Esq., F.G.S. and F.R.G.S.

To W. P. Andrew, Esq., Chairman of the European and Indian Junction Telegraph Company.—13th Aug. 1856.

Dear Sir,—I have much pleasure in transmitting to you my ideas upon the subject of telegraphic communication from Seleucia to the Persian Gulf along the valley of the Euphrates.

In doing so I must premise that my acquaintance with the countries to be traversed is not only derived from explorations made as geologist and mineralogist to the Euphrates expedition under General Chesney, but also from opportunities subsequently afforded to me when in charge of an expedition sent to the same and neighbouring regions by the Royal Geographical Society.

no physical obstacles whatsoever to conveying an electric chain between the two points proposed.

The country is throughout comparatively level, easy for access, with most of the materials of labour at hand. The utmost elevation of the line of watershed between the Mediterranean and the Euphrates, along the line of levels carried by the officers under the command of General Chesney, was 1,750 feet, with a very gentle ascent, and the height of the bed of the Euphrates at the termination of the same line of levels was 550 feet.

The rise of ground on the direct line to Aleppo is still less.

There is a tract of hard limestone to cross on the line to Aleppo, but there are no mountains, rivers of any magnitude, ravines, or any other obstacles that are worthy of notice, to be overcome.

It is almost needless to add that, once the valley of the Euphrates attained, there is an almost continuous and uninterrupted gradual descent to the Persian Gulf. The soft and friable rocks approach the river at but few points, and, with the exception of the basaltic ridge at Zelabah, and a patch of hard limestones on the left bank at Annah, never attain an elevation much exceeding 100 feet, and the basalts leave a river margin wide enough for several lines of railway.

Throughout, the same circumstances which give such unusual facilities to the prolongation of a line of railway along the valley of the Euphrates naturally also apply themselves to the prolongation of a line of telegraphic communication.

The difficulties which present themselves are solely such as may be anticipated from the semi-barbarous condition of the people inhabiting the country, and these I believe to be very generally exaggerated.

Almost all possible accidents would be anticipated were proper precautionary measures adopted.

The precautionary measures I allude to would be, first, the support of the Ottoman Government and of the local authorities; and secondly, the countenance of the Arab Sheikhs,

which could be obtained by a very trifling subsidy, to be paid so long as the wire remained intact, and to be withdrawn or forfeited when it was injured.

This would be the cheapest kind of surveillance that could be obtained in the countries in question.

It would be further essential to explain to the Arab Sheikhs the nature of the objects proposed.

They would explain the matter again in their own way to their followers, and it is a great mistake to suppose that the Arabs would not be open to such an explanation (although not expected to understand the *modus operandi* any more than a European peasant), and that they would not be influenced by the moral obligations imposed upon them.

The immediate object of such explanation would be to more particularly do away with all suspicious or superstitious ideas, which might otherwise be associated with the laying down of a line of telegraphic communication.

The simple statement that the Electric Telegraph was used to convey the messages of the Sultan would protect it from all accidents.

Once the Valley of the Euphrates attained, the population of its long banks are, for the most part, pastoral and agricultural.

The country is certainly exposed to the inroads of the Bedouin Arabs, but even then I do not believe the Arab to be wantonly destructive.

The existence of so many and of such extensive remains of olden times scattered over their country attests to the contrary.

There are medieval castles in the Valley of the Euphrates claimed by no one, and untenanted, yet which are in part inhabitable to the present day. Nesm Kalah is a remarkable instance of this kind. Inscriptions on dry mud have existed untouched from the days of the Caliphs. The habits of the Arabs leading them to disdain stone for building purposes,

edifices of olden time are much less injured among them than they would be elsewhere. In what other country would a Palmyra be found abandoned to the first comer, yet almost unscathed?

The Euphrates Expedition left two or three guns at Fort William in 1836. The natives respected them so far that Hafiz Pacha used them in the defence of Birijik in 1839.

I have found a small collection of Roman coins in Arab tombs at Balis. The people had found them. They did not know what to do with them, yet they did not wantonly throw them away. They had belonged to some departed race: they would consecrate them to their dead. Examples of this kind might be almost infinitely multiplied.

In case the system of subterranean wires is adopted, it would require the same precautionary measures to be taken as in the case of a line upon posts; but it is evident that the wires would be far less exposed to accidents.

A line from Seleucia, by Aleppo, to Balis, would connect itself by the Valley of the Euphrates with the projected railway at Jaber Castle, at Aleppo, at Seleucia, and, if deemed advisable, at Antioch, so as to answer all the purposes of the railway, and, for the remainder of the distance along the valley of the Euphrates and Tigris, it would probably follow the same route.

A third plan of carrying an electric telegraph presents itself along the valley of the rivers Euphrates and Tigris, different from those before alluded to, and that is along the bed of the rivers.

The advantage gained in distance by saving the bends of the river, and which would amount to probably about one-fifth of the whole distance, point to a line of telegraph on posts, or to a subterranean cable, as being preferable to a fluviatile one. The soil of the valley of the Euphrates is peculiarly adapted for the latter system, being for the most part river alluvium, and, when not so, composed of soft and friable rock formations

(marls, gypsum, and red sandstones), easily cut, or through which tunnels could be bored with great facility.

There is nothing, indeed, in the Euphrates valley that will compare for a moment with India, or other countries through which electric telegraphs have been carried, dependent or independent of railways.

Nature has positively left there a great open gap, with almost unexampled facilities for all such undertakings, whether railway or telegraph. From the parallel of Aleppo there are no glens, ravines, or narrow, precipitous rocky passes whatsoever. Rocks abut upon the river at a few points; but only so as to leave a margin for many lines of railway or electric telegraph. It is to be presumed that the telegraphic cable, upon reaching the alluvial plains of Babylonia, a little above Felujah, will be carried across that plain to Bagdad, in consequence of the importance of that place as a commercial emporium.

For this brief distance no more difficulties would present themselves than elsewhere to a line on posts, or to a subterranean cable.

But, whether the valley of the Euphrates is followed south of Felujah, or that of the Tigris south of Bagdad, it might be advisable to carry the cable thenceforward along the bed of either river, on account of the existence of extensive tracts of marsh, which would necessitate a line on posts or a subterranean cable being carried at certain points at a distance away from the banks.

In the latter case the Tigris presents some slight advantages over the Euphrates, in having, for the greater part of its course, firmer banks.

In conclusion, however, as far as my own experience goes, and after a careful consideration of the subject in all its bearings, I do not see any reasons why, under ordinary circumstances, a common Electric Telegraph of insulated

iron, or stone, should not be adopted for the whole length of the line projected.

I have the honour to be, &c., &c.,

(Signed) WILLIAM AINSWORTH, F.G.S. and F.R.G.S.

Mr. BURKE stated that that was the case of the Promoters of the Bill.

The CHAIRMAN stated that the Committee were of opinion that the Preamble of the Bill was proved.

The Committee went through the clauses, and the Bill was ordered to be reported.

IMPERIAL LIBRARY.

PRINTED BY COX AND WYMAN, GREAT QUEEN STREET